

Introduction and Objectives

The key element for the effective control in PRRSV endemic farms is the cease of vertical transmission. At present, the proportion of vertical transmission events in conventional farms infected by PRRSV has not been quantified. The aim of this study was to determine the proportion of viraemic births in order to know that proportion. This information can be useful for further studies about the transmission of the virus in maternities and to help to forecast the potential impact in nurseries.

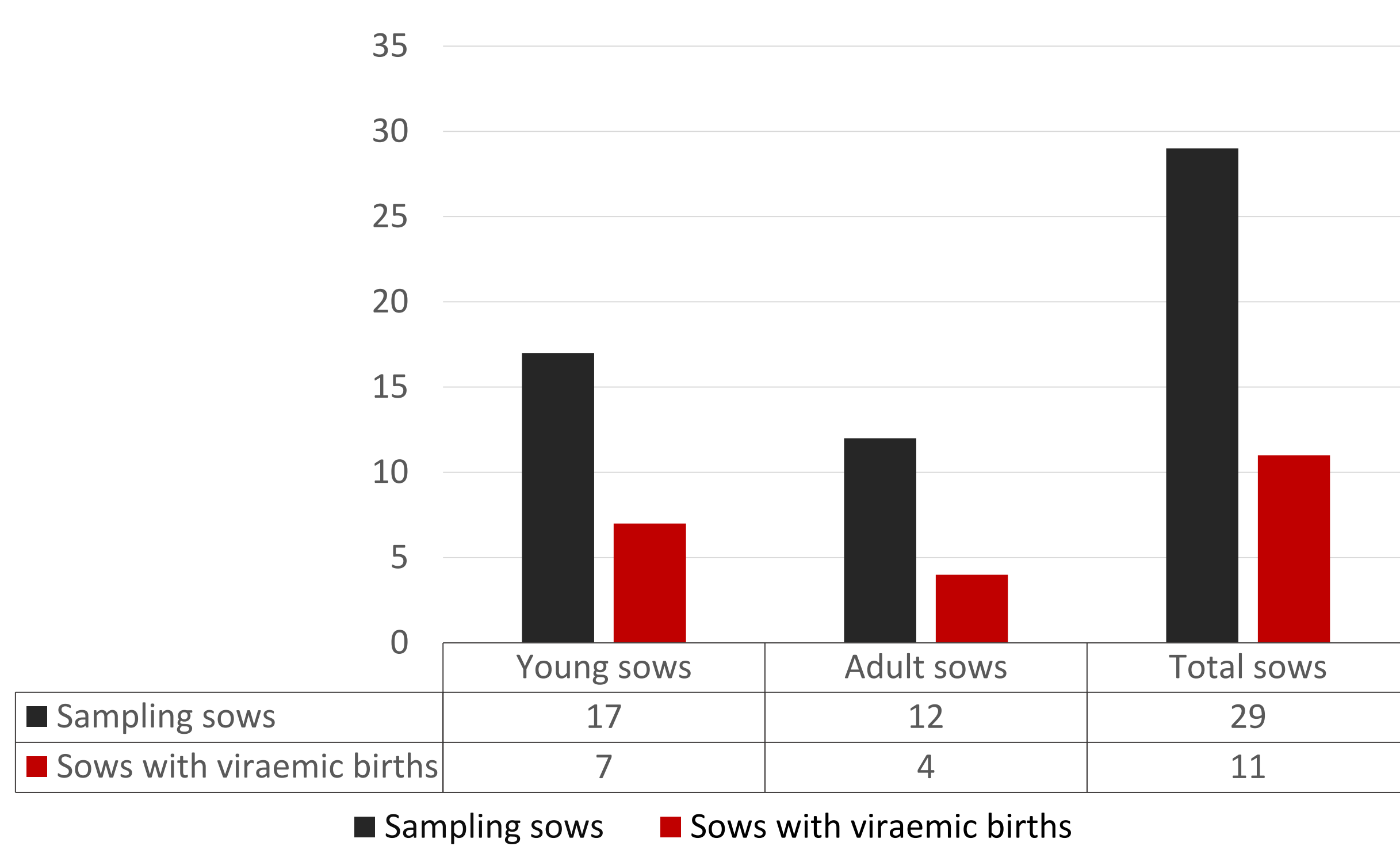
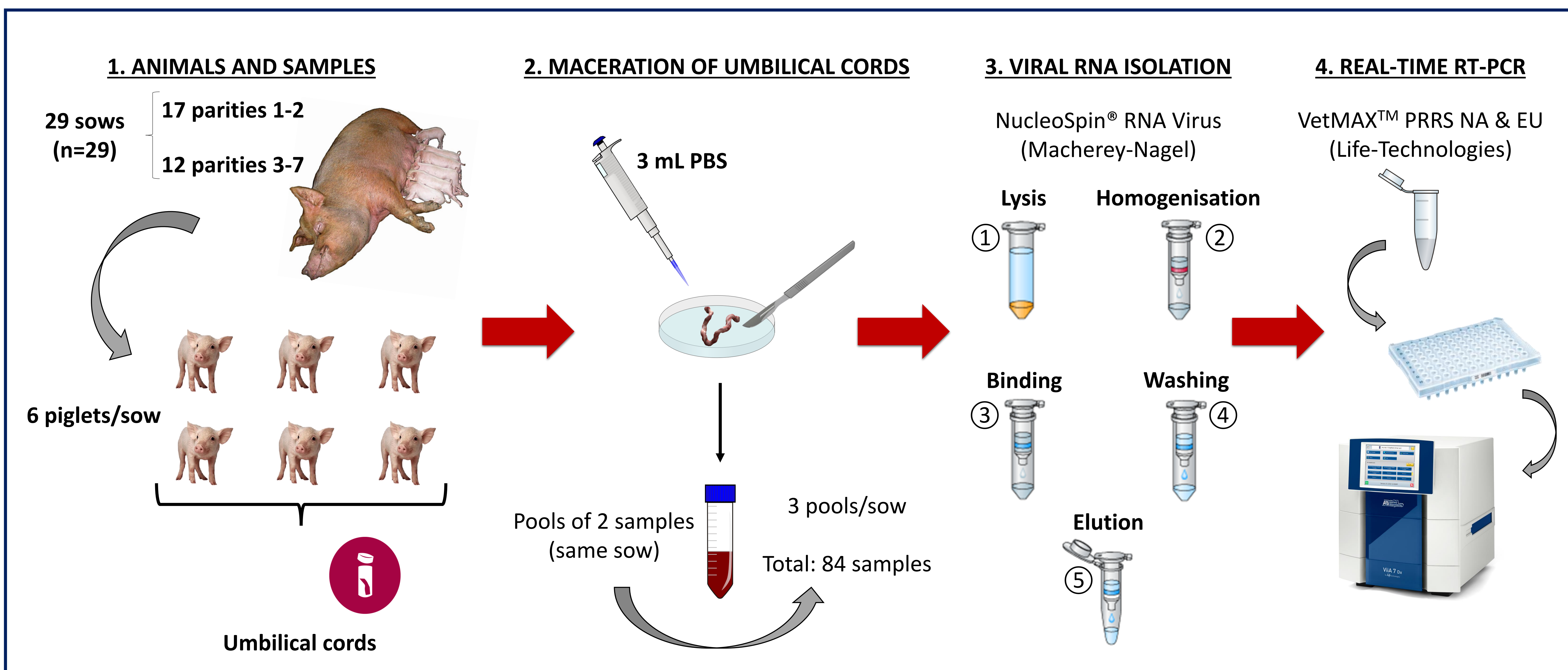
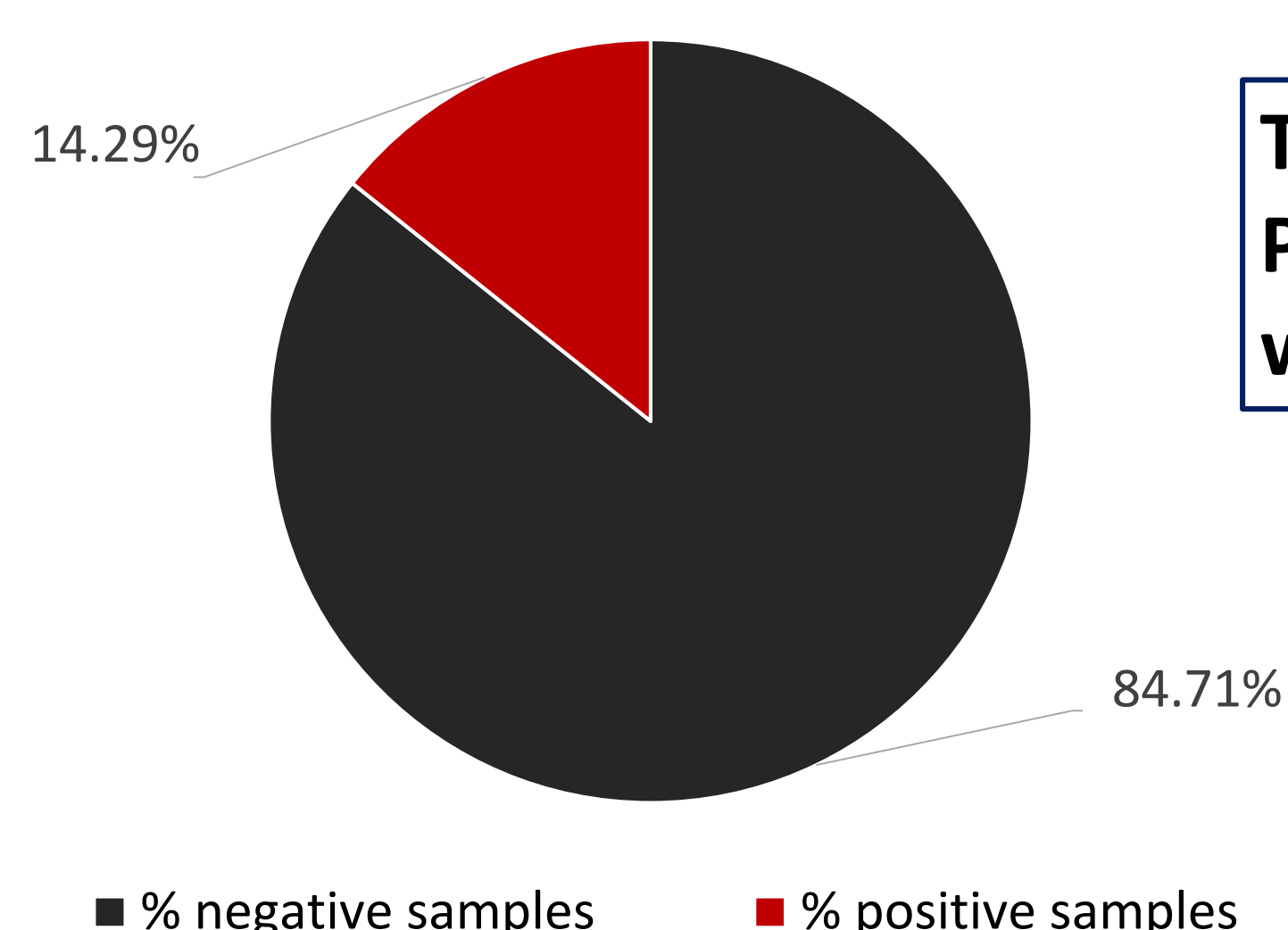


Fig. 1: N° of young and adult sows with viraemics births. In total, 11/29 (37.9%) viraemic births. 7/17 (41.2%) young sows and 4/12 (33.3%) adult sows had viraemic births. No significant differences were found.



This farm vaccinates against PRRS but there are still births with vertical transmission.

Fig. 2: Proportion of positive pools. 12/84 (14.29%) pools were positive. The proportion of positive samples was relatively low, but in Fig.1 we can see that the proportion of viraemic births in young and adult sows were high.

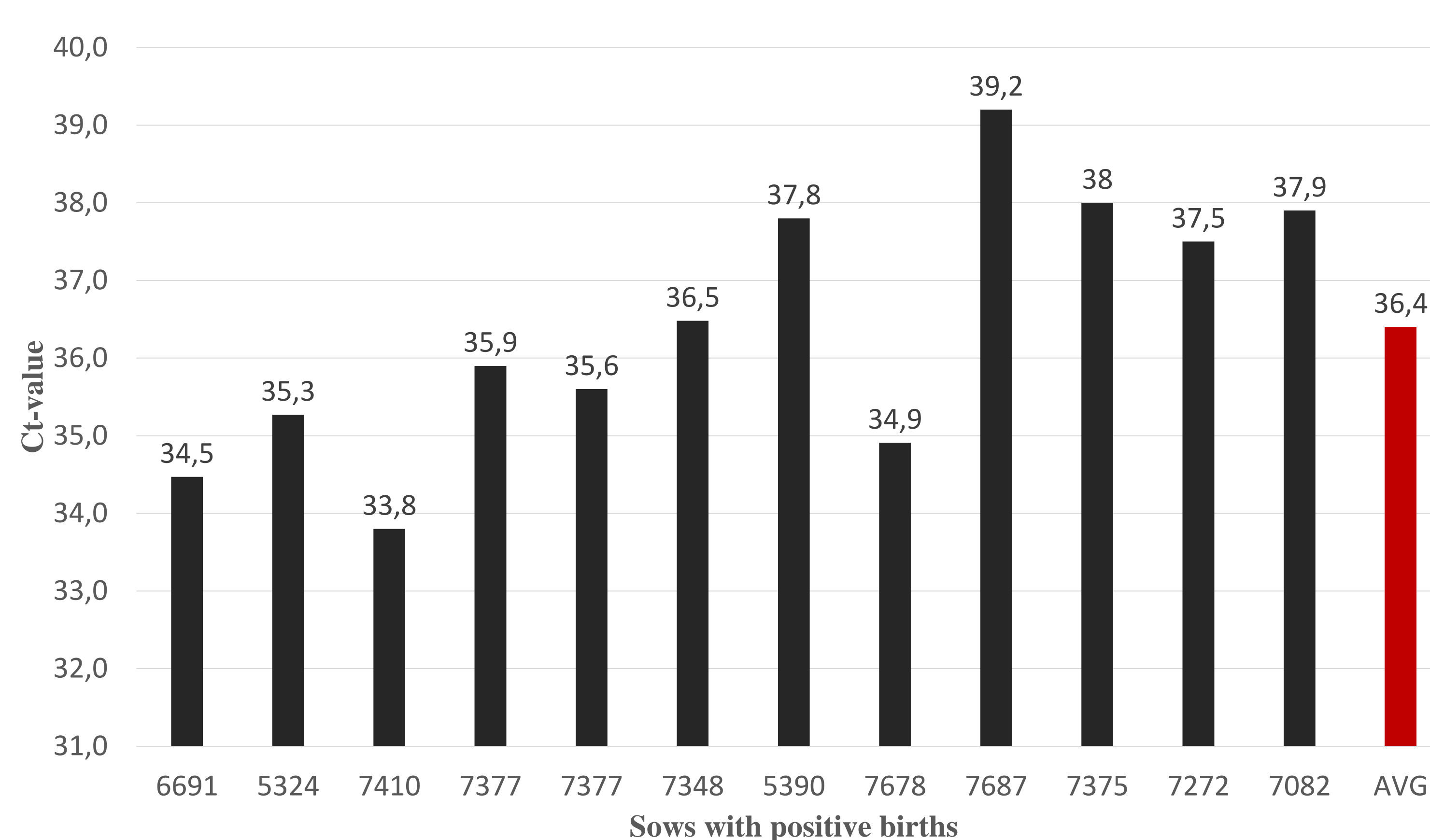


Fig. 3: Sows with positive births and their Ct-value. One sow had 2 positive pools and the others had only 1. This suggests that 1-2/6 piglets for each positive sow had suffered vertical transmission.

Some positive samples had high Ct-values (39.2, 38.0); this could suggest a surface contamination of the umbilical cord. However, for samples collected in the first 12 h postpartum and before cross-fostering, if contamination happened, most likely it would be originated from the sow, birth materials or other littermates (Martín-Valls, 2018)

Conclusions

- The use of umbilical cords is an efficient method to establish the proportion of deliveries with the birth of PRRSV viraemic piglets.
- Vertical transmission can happen in multi-vaccinated sows. The factors involved in this transmission are not known yet.
- The birth of viraemic piglets in vaccinated endemic farms may contribute substantially to the spread of the infection in maternities and nurseries.

References

- Martín-Valls G, Hidalgo M, Cano E, Mateu E. 2018. Testing of umbilical cords by real time PCR is suitable for assessing vertical transmission of porcine reproductive and respiratory syndrome virus under field conditions. Vet J, 234: 27-29.